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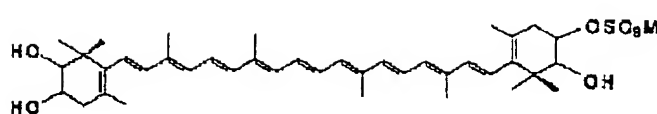
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APPLICANT : KAIYO BIO TECHNOL
KENKYUSHO:KK;

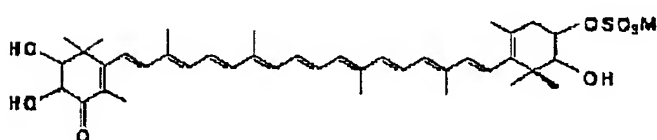
INVENTOR : SHIZURI YOSHIICHI;

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1:20)

TITLE : CAROTENOID SULFATE AND ITS
PRODUCTION



I



II

ABSTRACT : PROBLEM TO BE SOLVED: To produce a new carotenoid sulfate, soluble in a water-soluble solvent and useful as a color tone improving agent and a redyeing agent for cultured fishes and shellfishes, a food additive, etc., by culturing a microorganism of the genus Flavobacterium having the productivity of a new carotenoid sulfate.

SOLUTION: This new carotenoid sulfate is represented by formula I (M^1 is H or a monovalent metal) and formula II (M^2 is H or a monovalent metal) and is useful as a color tone improving agent and a redyeing agent for fishes and shellfishes, a food additive, etc., soluble in a water-soluble solvent. The new highly polar carotenoid is obtained by inoculating a microorganism, belonging to the genus Flavobacterium and having the ability to produce the new carotenoid sulfate [e.g. Flavobacterium PC-6 strain (FERM P-15183)] into a culture medium, separating the microbial cell from the cultured solution, extracting and purifying the resultant product as nostoxanthin-3-sulfate represented by formula I and 4-ketonostoxanthin-3'-sulfate represented by formula II.

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